Message

From: Richards, Jon M. [Richards.Jon@epa.gov]
Sent: 12/21/2021 9:53:44 PM
To: Amoroso, Cathy [Amoroso.Cathy@epa.gov]
Subject: RE: my review of the ASER data RE: follow up on Principals meeting last week

See my update from fish results you just sent
I'm confident Glenn can still make the OW statement for rads
jon

From: Amoroso, Cathy <Amoroso.Cathy@epa.gov>
Sent: Tuesday, December 21, 2021 4:52 PM
To: Richards, Jon M. <Richards.Jon@epa.gov>
Subject: RE: my review of the ASER data RE: follow up on Principals meeting last week

Thanks.

From: Richards, Jon M. <Richards.Jon@epa.gov>
Sent: Tuesday, December 21, 2021 4:40 PM
To: Adams, Glenn <Adams.Glenn@epa.gov>; Amoroso, Cathy <Amoroso.Cathy@epa.gov>; Alexander, Shanna <Alexander.Shanna@epa.gov>
Subject: my review of the ASER data RE: follow up on Principals meeting last week

I reviewed the last 3 years, 2020, 19, 18: focusing on fish and sw

1. Noted they sometimes added specific radionuclides over the main 5 of gross alpha, beta, Sr90, H3, K40 [always natural unlike U, Th, Ra], e.g. '19 they added Np237, Am241, U234&238, but Cs137 not pointed out in these 3 at least, but should show up in a gamma spec analysis, which they didn't do..
2. They are always comparing sw to 4 % of the DCS or 4 mrem, which is an obvious ref, to MCLs that are mostly based on 4 mrem, and the only regulation that uses that particular dose
3. They used sunfish for top feeder and catfish for bottom feeder representatives which echoes Shanna and I emphasizing catfish in at least the 0.0 km stretch, I didn't see significant differences in this low data between sunfish and catfish, unlike PCBs for example..
4. All the rad data is very very low, and the fact they are reporting results [like 0.005] is probably all below detection limits, and in their 'dose' summaries, did show up to 1 to 4 mrem for ORR outfall and downstream Lower Clinch River
5. So even with this rad data and doses, I believe we can certainly say fish/surface water pathway is definitely very low radiation levels, most comparable to detection limits or background streams

   I'm confident we can say the OW statement you said. Even with all the potential concerns from this data, its still in my view very low and even the dose estimates of 1 to 4 mrem to the receptor, though higher then I would have thought, are still within our risk range.. 4 mrem is approx. 1E-4 risk, and remember our rad risk range goes to 3E-4 risk for 12 mrem approximately..

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From: Richards, Jon M.
Sent: Monday, December 20, 2021 9:54 AM
To: Adams, Glenn <Adams.Glenn@epa.gov>; Amoroso, Cathy <Amoroso.Cathy@epa.gov>; Alexander, Shanna <Alexander.Shanna@epa.gov>
Subject: RE: follow up on Principals meeting last week

6.4.2. Results In 2020, as has been the case since 2009, there were no statistical differences in radionuclide concentrations in surface water samples collected from the Clinch River upstream and downstream of DOE inputs. No radionuclides were detected above 4 percent of the respective DCSs. Mercury was not detected in 2020 in samples from any of the three sampling locations where mercury samples are collected, Clinch River kilometer (CRK) 66, CRK 32, and CRK 16.

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From: Adams, Glenn <Adams.Glenn@epa.gov>
Sent: Monday, December 20, 2021 9:47 AM
To: Amoroso, Cathy <Amoroso.Cathy@epa.gov>; Richards, Jon M. <Richards.Jon@epa.gov>; Alexander, Shanna <Alexander.Shanna@epa.gov>
Subject: follow up on Principals meeting last week

https://doeic.science.energy.gov/ASER/

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